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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/658,062	09/09/2003	Takashi Motoyoshi	52433/740	4063

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NEW YORK, NY 10004

EXAMINER

YEE, DEBORAH

ART UNIT	PAPER NUMBER
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1742

DATE MAILED: 06/21/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/658,062

Applicant(s)

TAKASHI MOTOYOSHI ET AL

Examiner

Deborah Yee

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10 November 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☒ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 11-10-03.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1 and 5 to 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Japanese patent 6-179945.
3. The English abstract of JP'945 discloses a electric welded steel pipe for reinforcing motor car doors having an alloy with constituents whose wt% ranges overlap those recited by claims . Moreover, prior art tensile strength (TS) of 150 to 180Kgf/m² (equivalent 1471 to 1765.26MPa) and yield ratio(YR) of 70 to 85% overlaps with the TS range of 1700MPa or more, and YR of 72% or less, respectively recited by claim 1. Also it should be noted that prior art yield ratio value is calculated with 0.2% proof stress whereas the present invention YR value is calculated with 0.1% proof stress. If prior art YR is calculated with its 0.1% proof stress, then its YR would be lower because 0.1% proof stress value is lower than the 0.2% proof stress value when measured on a stress-strain curve. In any event, the overlap in alloy and property ranges establishes a prima facie case of obviousness because it would be obvious to one of ordinary skill in the art to select the claimed ranges from the broader disclosure of the prior art since the prior art has the same utility and similar properties, see MPEP 2144.05.

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4. In regard to composition, alloy 2 in table 1 on page 5 of JP'945 meets the composition recited by claims 7 and 8 and when calculated, meet the equation recited by claim 5.

5. Even though dislocation density recited by claim 6 is not taught by prior art, such property would be expected since prior art teaches hot and cold working which creates dislocations, and also similar properties are obtained, and in absence of proof to the contrary.

6. The English abstract of JP'945 teaches a steel pipe having a microstructure containing martensite produced by normalizing comprising the steps of heating at austenitic temperature and cooling . Even though prior art not teach induction hardening with the prior austenite grain size number is #6 as recited by claim 9, such would not be a patentable distinction. Note it would be a matter of choice well within the skill of the artisan to heat with induction since it is a well known heating method in the metallurgical field. Moreover, the prior art austenite grain size of 6 or more would be expected since composition, process, and property limitations are closely met, and in absence of proof to the contrary.

7. In regard to claim 10, prior art in the English translation, paragraph 8 teaches pipe can be square shape or a variant steel pipe.

Claim Rejections - 35 USC § 102

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

9. Claims 1,2 ,5, 6,9 and 10 are rejected under 35 U.S.C. 102(b) as being anticipated by Okada et al (US Patent 5,374,322).

10. Okada disclose high tensile strength (TS) and low yield ratio (YR) martensitic steel welded pipes which meet the property limitations recited by claims 1 and 2. See examples in Tables 1 and 2: B1 having a TS 176Kg/mm2 (1726MPA)and YR of 0.64 ; B6 having TS 183kg/mm2(1794.7MPA) and YR of 0.62; and B8 having TS of 185 (1814.3MPA) and YR of 0.62. Also prior art calculates yield ratio with a proof stress of 0.2% whereas present invention uses 0.1%. If Okada measured and used the 0.1% proof stress value for the prior art alloy, then it would have a lower yield ratio and hence would meet the claim. Note the yield ratio = proof stress value divided by tensile strength value, and the value of 0.1% proof stress is always lower than 0.2% proof stress on the stress-strain graph.

11. Similar to claim 5, Okada discloses specific example B8 in Tables 1 and 2 having a Si content of 0.26% which falls within the equation range calculated at 0.17 to 0.31%, and has a tensile strength of 185kg/mm2 (1814.3MPA) .

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12. Even though dislocation density recited by claim 6 is not taught by prior art, such property would be expected since prior art teach hot and cold working which creates dislocations, and similar properties are obtained, and in absence of proof to the contrary.

13. In regard to claim 9, Okada on lines 31 to 42 of column 10 discloses induction heating at austenitic temperature followed by cooling. Even though prior art does not teach a prior austenite grain size number of 6 or more, such would be expected since composition, process, and process limitations are closely met, and in absence of proof to the contrary.

14. Okada discloses electric resistance welded pipe which would include round or square sectional shape recited by claim 10.

15. Claims 3,4,7,8, and 11 to 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Okada et al (US Patent 5,374,322).

16. Okada discloses electric-resistant welded pipes B10 in Tables 1 and 2 having composition and properties that closely meet claims 3 and 4. Note B10 has a TS of 210kg/mm² (2059.47MPa) and is within the TS of 1,900MPa recited by claim 3 and 2,000MPa recited by claim 4. Although B10 has a yield ratio of 85% which is higher than the 68% or less recited by claim 3 and 66% or less recited by claim 4, such would not be a patentable difference. Note that these values are not comparable since prior art measures YR with 0.2% proof stress whereas the present invention measures YR with 0.1% proof stress. . If , however, Okada measured and used the 0.1% proof stress value for the prior art alloy, it would be lower than its 0.2% proof stress values

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and therefore would produce a lower yield ratio since yield ratio = stress value divided by tensile strength value. Hence claims would not patentably distinguish over prior art.

17. Okada in claim 1 of column 19 discloses a welded pipe having an alloy with constituents whose wt% ranges overlap those recited by the claims 7,8 and 11. The overlap in alloy wt% ranges establishes a prima facie case of obviousness because it would be obvious to one of ordinary skill in the art to select the claimed ranges from the broader disclosure of the prior art since the prior art has similar utility and properties, see MPEP 2144.05.

18. Also similar to method claims 11 to 13, Okada in Table 2 and lines 31 to 44 makes steel pipe by hot rolling, forming pipe with ERW process, induction heating and cooling. Even though prior art cools with air whereas the present invention cools with water at a higher rate, such would not be a patentable difference since both water and air cooling mediums are well known in the art and it would be a matter of choice well within the skill of the artisan to select a cooling medium. Also applicant has not demonstrated (e.g. by comparative test data) that cooling rate is somehow critical and productive of new and unexpected results.

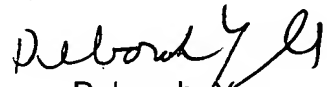
19. The unapplied references have been cited to further depict the state of the art in welded martensitic steel pipes.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Deborah Yee whose telephone number is 571-272-1253. The examiner can normally be reached on Monday-Friday from 6:00 to 2:30.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy King can be reached on 571-272-1244. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Deborah Yee
Primary Examiner
Art Unit 1742

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